

HANOI UNIVERSITY OF SCIENCE AND TECHNOLOGY
School of Electrical and Electronic Engineering



**FINAL REPORT: WEB AND MOBILE
APPLICATION PROGRAMMING**
Project: Build website and app to manage
high school scores

Instructor: Ph.D. Dao Trung Kien

Students:

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Ha Noi, 6/2025

I. Main Features

The system is designed to efficiently support the management of students, grades, and user accounts. Key features include:

a. User Management

- Login with role-based access control (admin or user).
- Register a new account and select a user role.
- Store user information using `localStorage`.

b. Student Management

- Add new students (name, year of birth).
- View the student list.
- Edit student information.
- Delete students from the system.

c. Grade Management

- View each student's gradebook (categorized by subject and semester).
- Update grades (admin only).
- Delete grades (admin only).
- Add new grades.
- Calculate average grades by semester.
- Filter grades by semester.

d. User Interface

- Clear and visually appealing login and registration pages.
- User-friendly and intuitive homepage.
- Responsive design – compatible with multiple screen sizes.

e. Supporting Features

- Submit feedback through the "Contact" form.
- Display errors and notifications using `alert()`.

II. Installation & usage instructions

1. Folder structure

```
Grade_Management/  
├─ backend/  
│   ├─ routes/  
│   ├─ db.js  
│   └─ index.js  
├─ frontend/  
│   ├─ src/  
│   └─ public/  
└─ package.json
```

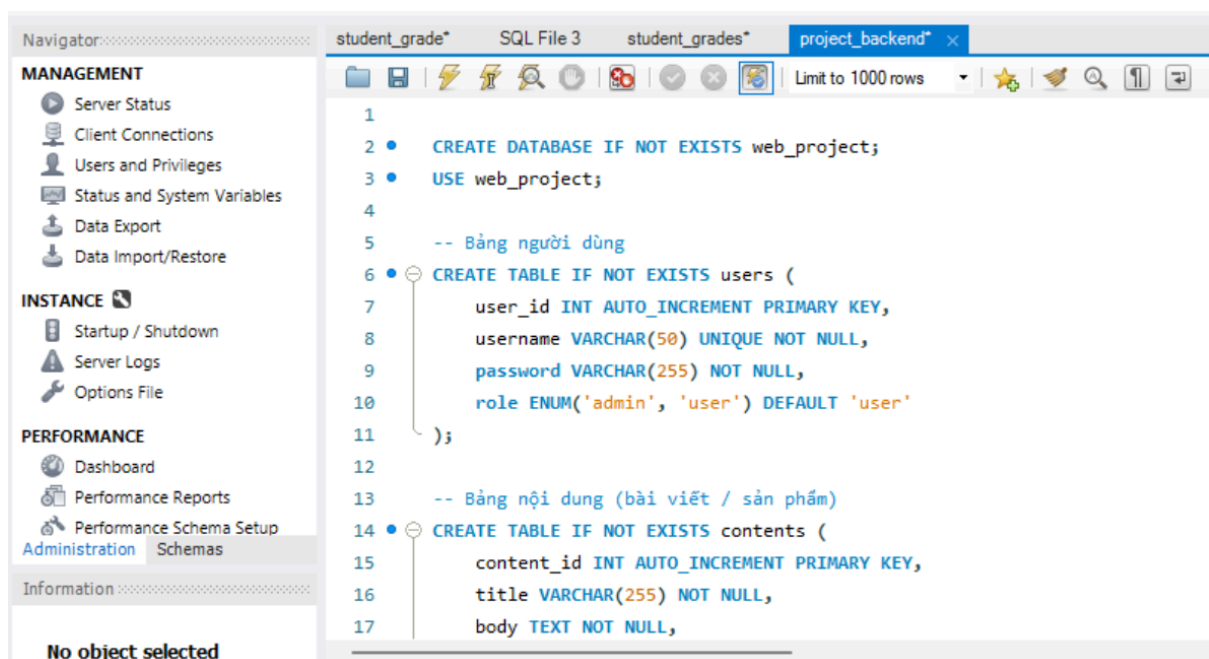
2.Installation

Step 1: Install Node.js

Step 2: Install MySQL and create database

```
CREATE DATABASE web_project;
```

```
USE web_project;
```



Step 3: Install backend / frontend for web and for mobile app

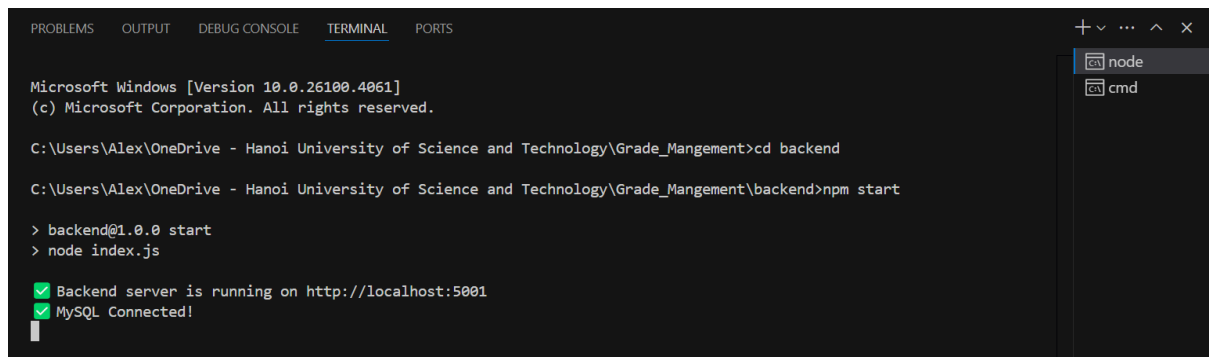
*Web:

- Backend

cd backend

npm install

node [index.js](#) or npm start



```
Microsoft Windows [Version 10.0.26100.4061]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Alex\OneDrive - Hanoi University of Science and Technology\Grade_Mangement>cd backend

C:\Users\Alex\OneDrive - Hanoi University of Science and Technology\Grade_Mangement\backend>npm start

> backend@1.0.0 start
> node index.js

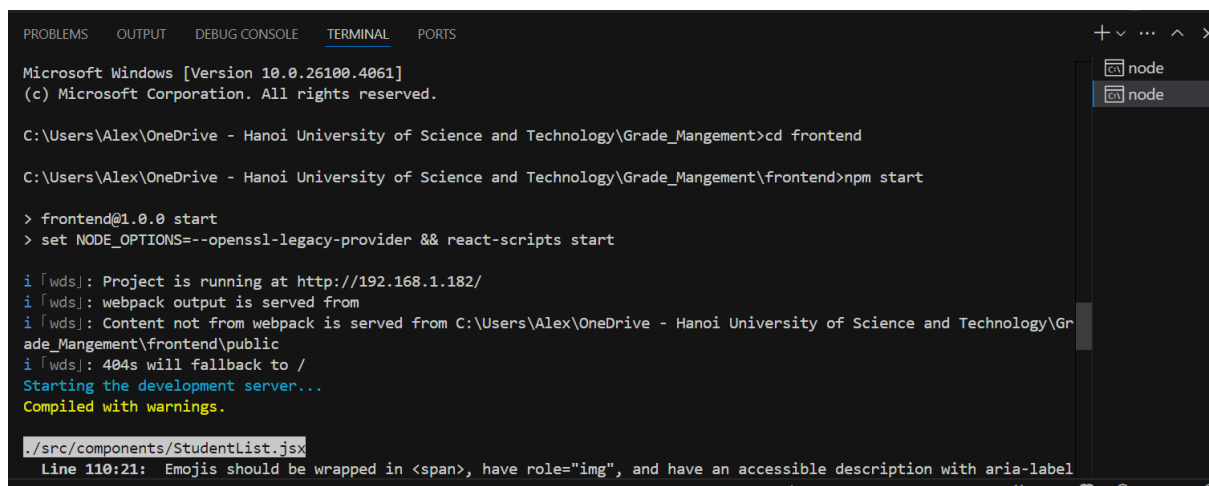
[✓] Backend server is running on http://localhost:5001
[✓] MySQL Connected!
```

-frontend

cd frontend

npm install

npm start



```
Microsoft Windows [Version 10.0.26100.4061]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Alex\OneDrive - Hanoi University of Science and Technology\Grade_Mangement>cd frontend

C:\Users\Alex\OneDrive - Hanoi University of Science and Technology\Grade_Mangement\frontend>npm start

> frontend@1.0.0 start
> set NODE_OPTIONS=--openssl-legacy-provider && react-scripts start

i [wds]: Project is running at http://192.168.1.182/
i [wds]: webpack output is served from
i [wds]: Content not from webpack is served from C:\Users\Alex\OneDrive - Hanoi University of Science and Technology\Grade_Mangement\frontend\public
i [wds]: 404s will fallback to /
Starting the development server...
Compiled with warnings.

./src/components/StudentList.jsx
Line 110:21:  Emojis should be wrapped in <span>, have role="img", and have an accessible description with aria-label
```

*Mobile app

Tạo project: `npx create-expo-app@latest <tên project> --template`

`cd <tên project>`

`npm run ios/android`

Package cài đặt bổ sung: `react-native-screens`, `react-native-safe-area-context`, `react-navigation/native`, `react-navigation/stack`, `react-native-gesture-handler`, `react-native-appwrite`, `react-native-url-polyfill`, `axios`, `react-native-dotenv`, `react-native-config`

database: `appwrite`

III.How to Use

-Access the system at: <http://localhost:3000>

-Sample Accounts:

admin / 123456

user / 123456

-Log in to access the management interface.

-As an admin, you can add/edit/delete students and grades.

-As an user, you can only view the score

-Visit /contact to submit feedback.

IV. Level of completion

WEB: 100%

MOBILE: 80%

V. Team member contribution

Student Name	Tasks	
Truong Tuan Hung 20224284	Web	Code Website, design website, build database, fix bugs.
Vu Thanh Hang 20224310	App	Xây dựng Giao diện, Logic trên ứng dụng, Gọi và hiển thị dữ liệu từ API
Nguyen Van Kiet 20224286		Viết Logic Server, Quản lý Xác thực & Phân quyền cho ứng dụng, Quản lý CSDL

